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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,431	10/24/2003	Thomas H. Lohr	3057-73240	2010
23643	7590	12/12/2005	EXAMINER	
BARNES & THORNBURG 11 SOUTH MERIDIAN INDIANAPOLIS, IN 46204			JOHNSON, VICKY A	
			ART UNIT	PAPER NUMBER
			3682	
DATE MAILED: 12/12/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/693,431

Applicant(s)

LOHR, THOMAS H.

Examiner

Vicky A. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: on page 4 line 5 "system 18" should be --system 16--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is indefinite and unclear because it recites the limitation that the first and second flanges move axially relative to one another, however the specification and the drawings disclose that only one of the flanges is moveable while the other flange is fixed. For this office action one flange will be fixed while the other flange moves axially relative to the fixed flange.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bostelmann (US 5,797,816).

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Bostelmann discloses a driver pulley system for use in a torque converter, the driver pulley system comprising a fixed unit (11) adapted to be fixed to a rotatable engine output for rotation therewith (col. 1 lines 34-37), the fixed unit including a fixed flange (11) and a cover (50), a centrifugal weight unit (60), and a movable unit (13) configured to move relative to the fixed unit (col. 2 lines 45-51), the movable unit including a movable flange (13) configured to cooperate with the fixed flange to receive a belt (14) of the torque converter therebetween (see Fig 1), the centrifugal weight unit being positioned between the movable flange and the cover (see Fig 1) and configured to move the movable flange toward the fixed flange in response to centrifugal force (col. 3 lines 45-52), the cover axially covering the centrifugal weight unit (see Fig 1), the movable unit including means (70, 71, 72) for transmitting torque from the movable flange to the cover through a path not including the centrifugal weight unit for transmission of torque to the engine output upon application of torque to the movable flange by the belt (col. 3 lines 61-67).

Re claim 2, the cover includes a drive plate (70) configured to rotate the movable unit and the torque transmission means includes a movable sleeve (24) coupled to the movable flange, a slider mount (72) coupled to an outer surface of the movable sleeve, and a slider (71) coupled to the slider mount for axial, slidable movement against the drive plate (see Fig 2).

Re claim 3, the slider mount (72) includes an axially elongated block coupled to the outer surface of the movable sleeve (see Fig 1) and the slider (71) includes an axially elongated collar fitted on the block (see Fig 2) and engaging spaced-apart first

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and second drive plate tabs (unnumbered tabs of 70 enclosing the sides of 71) included in the drive plate (see Fig 2), an axially elongated first slider tab (unnumbered side of 71, see Fig 2) cantilevered to the collar (see Fig 2) and engaging an edge of the first drive plate tab (see Fig 2), and an axially elongated second slider tab cantilevered to the collar and engaging an edge of the second drive plate tab (see Fig 2).

Re claim 4, the cover includes a base plate and three drive plates (70) coupled to the base plate and spaced about 120 degrees apart from one another (see Fig 2) to rotate the fixed unit, the torque transmission means includes a movable sleeve (24) coupled to the movable flange (13), three slider mounts (72) coupled to the movable sleeve and spaced about 120 degrees apart from one another (see Fig 2), and three sliders (71), and each slider is coupled to one of the slider mounts and configured for axial, slidable movement against one of the drive plates (see Fig 2).

Re claim 5, a fixed unit (11) adapted to be fixed to a rotatable engine output for rotation therewith (col. 1 lines 34-37), the fixed unit including a fixed flange (11) and a cover (50), a centrifugal weight unit (60), and a movable unit (13) configured to move relative to the fixed unit (col. 1 lines 45-51), the movable unit including a movable flange (13) configured to cooperate with the fixed flange to receive a belt (14) of the torque converter therebetween (see Fig 1), the centrifugal weight unit being positioned between the movable flange and the cover (see Fig 1) and configured to move the movable flange toward the fixed flange in response to centrifugal force (col. 3 lines 45-52), the cover axially covering the centrifugal weight unit (see Fig 1), the movable unit including a torque transmission device configured to transmit torque from the movable

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flange to the cover through a path not including the centrifugal weight unit upon application of torque to the movable flange by the belt (col. 3 lines 61-67).

Re claim 6, the cover includes a drive plate (70) configured to rotate the movable unit and the torque transmission device includes a slider (71) configured for axial, slidable movement against the drive plate (see Fig 2).

Re claim 7, the torque transmission device includes a movable sleeve (24) coupled to the movable flange (13) and a slider mount (72) coupled to the movable sleeve and the slider (71) is coupled to the slider mount (72).

Re claim 8, the slider mount (72) includes a block coupled to an outer surface of the movable sleeve (24) and the slider (71) includes a collar fitted on the block and engaging the drive plate (see Fig 2).

Re claim 9, the drive plate (70) includes a drive plate tab mount and first and second drive plate tabs extending from the drive plate tab mount (see Fig 2) and cooperating with the drive plate tab mount so that the drive plate has a U-shaped cross-section (see Fig 2), the collar is positioned between the first and second drive plate tabs and includes an axially elongated first side wall engaging the first drive plate tab (see Fig 2), an axially elongated second side wall engaging the second drive plate tab (see Fig 2), and a pair of end walls extending between the first and second side walls (inherent), and the slider includes an axially elongated first slider tab cantilevered to the first side wall and engaging an edge of the first drive plate tab and an axially elongated

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second slider tab cantilevered to the second side wall and engaging an edge of the second drive plate tab (see Fig 2).

Re claim 10, the slider (71) includes a collar and a slider tab cantilevered to the collar, the collar is fitted on a block included in the torque transmission device and engages a drive plate tab included in the drive plate (70), and the slider tab engages an edge of the drive plate tab (see Fig 2).

Re claim 11, the slider (71) includes a collar engaging the drive plate.

Re claim 12, the drive plate (70) engages the slider (71) to block radially outward movement of the slider (see Fig 2).

Re claim 13, the slider (71) is positioned radially inwardly from the drive plate (see Fig 2).

Re claim 14, the cover includes a base plate and three drive plates (70) coupled to the base plate and spaced about 120 degrees apart from one another to rotate the fixed unit (see Fig 2), the torque transmission device includes three sliders (71) spaced about 120 degrees apart from one another (see Fig 2), and each slider is configured for axial, slidable movement against one of the drive plates (see Fig 2).

Re claim 15, the torque transmission device is positioned radially inwardly from the centrifugal weight unit (see Fig 1).

Re claim 16, a fixed unit (11) adapted to be fixed to a rotatable engine output for rotation therewith, the fixed unit including a fixed flange (11) and a cover (50), a

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centrifugal weight unit (60), and a movable unit configured to move relative to the fixed unit, the movable unit including a movable flange (13) configured to cooperate with the fixed flange to receive a belt (14) of the torque converter therebetween, the centrifugal weight unit being positioned between the movable flange and the cover and configured to move the movable flange toward the fixed flange in response to centrifugal force, the cover axially covering the centrifugal weight unit (see Fig 1), the movable unit including a torque transmission device including a slider (71) configured for axial, slidable movement against the cover for transmission of torque from the movable flange to the cover through a path including the slider but not including the centrifugal weight unit upon application of torque to the movable flange by the belt and axial movement of the movable flange away from the fixed flange due to radially inward movement of the belt (col. 3 lines 61-66).

Re claim 17, the cover includes a drive plate (70) configured to rotate the movable unit, the movable unit includes a movable sleeve (24) coupled to the movable flange (13) and a slider mount (72) coupled to the movable sleeve, and the slider is coupled to the slider mount for axial, slidable movement against the drive plate for transmission of torque (see Fig 2), in series, from the movable flange through the movable sleeve, the slider mount, and the slider to the drive plate (see Fig 1).

Re claim 18, the slider mount (72) includes a block coupled to an outer surface of the movable sleeve, the slider includes a collar fitted on the block and a slider tab cantilevered to the collar, the collar engages a drive plate tab included in the drive plate



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to transmit torque to the drive plate tab, and an edge of the drive plate tab engages the slider tab to block radially outward movement of the slider (see Figs 1 and 2).

Re claim 19, the movable sleeve includes first (16) and second end (24) portions, the movable flange is coupled to the first end portion (see Fig 1), and the slider mount is coupled to the second end portion (see Fig 1).

Re claim 21, first (13) and second (11) flanges adapted to receive a belt (14) of the torque converter therebetween, a centrifugal weight unit (60) being configured to move the first flange axially relative to the second flange in response to centrifugal force, a cover (50) axially covering the centrifugal weight unit, the cover including U-shaped drive plate (70) configured for rotation of the first flange, and a torque transmission device including a sleeve coupled to the first flange for axial movement therewith, a slider mount coupled to the sleeve, and a T-shaped slider (71) coupled to the slider mount and received by the drive plate for axial, slidable movement against the drive plate, the torque transmission device being configured to transmit torque from the first flange to the drive plate through a path including the sleeve, the slider mount (72), and the slider but not including the centrifugal weight unit upon application of torque to the first flange by the belt (col. 3 lines 61-67).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bostelmann (US 5,797,816).

Bostelmann discloses a device as described above, but does not disclose the slider made of acetal.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the slider of Bostelmann to be made with acetal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use and acetal is known to decrease friction. *In re Leshin*, 125 USPQ 416.

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

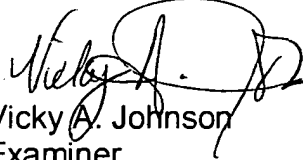
5,209,703	Mastine et al	(pulley)
4,575,363	Burgess et al	(pulley)
4,364,735	Plamper et al	(weights)
6,958,025	Huddleston	(slider)
4,826,467	Reese et al	(slider)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (571) 272-7106. The examiner can normally be reached on Monday-Friday (7:00a-3:30p).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Bucci can be reached on (571) 272-7099. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Vicky A. Johnson  
Examiner  
Art Unit 3682  
12/10/05